ABSTRACT OF THE DISCLOSURE

A method and apparatus provides protection against resource failures in Open Shortest Path First (OSPF) networks, without increasing the complexity of the network topology and/or management. An internal router (IR) automatically maintains a back-up link in a dormant state until a network failure affecting communications with a primary adjacent area border router (ABR) is detected. Upon detection of the network failure, the IR activates the back-up link in order to enable traffic flow to an alternate adjacent ABR, which by-passes the network failure. Upon recovery of communications with the primary adjacent ABR, the IR automatically deactivates the back-up link and resumes traffic flow through the primary adjacent ABR. As a result, traffic is forwarded into the back-up link only when communications with the primary adjacent ABR has failed, thereby maintaining simplicity in the network topology, and minimizing network management and administration requirements.